Overview of an Integrated Medical System for Exploration Missions

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The Exploration Medical Capability (ExMC) element of the NASA Human Research Program (HRP) is charged with addressing the risk of unacceptable health and mission outcomes due to limitations of in-flight medical capabilities. The Exploration Medical System Demonstration (EMSD) is a project within the ExMC element aimed at reducing this risk by improving the medical capabilities available for exploration missions. The EMSD project will demonstrate, on the ground and on ISS, the integration of several components felt to be essential to the delivery of medical care during long-duration missions outside of low Earth orbit. The components of the EMSD include the electronic medical record, assisted medical procedure software, medical consumables tracking technology and RFID- tagged consumables, video conferencing capability, ultrasound device and probes (ground demonstration only), peripheral biosensors, and the software to allow communication among the various components (middleware). This presentation seeks to inform our international partners of the goals and objectives of the EMSD and to foster collaboration opportunities related to this and future projects.